

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Younan Xia

Application No.: 10/732,910

Art Unit
1793

Filed: December 9, 2003

For: METHODS OF NANOSTRUCTURE
FORMATION AND SHAPE SELECTION

Examiner: George P. Wyszomierski

Customer No.: 32642

Confirmation No.: 6911

COMMISSIONER FOR PATENTS

APPLICATION FOR PATENT TERM ADJUSTMENT INCLUDING REQUEST FOR
RECONSIDERATION UNDER 37 CFR § 1.705(d)

Dear Sir:

1. Patentees hereby request reconsideration of the patent term adjustment of 528 days indicated on the front page of U.S. Patent No. 7,585,349. A copy of the front page of the patent is attached as Exhibit A. It is respectfully requested that Patentees be granted a patent term adjustment of 1196 days.

2. Patentees respectfully request that consideration of, and a decision regarding, this Application for Patent Term Adjustment Including Request for Reconsideration (hereinafter "Request") be held in abeyance, pending a final, non-appealable, decision on the merits in Wyeth v. Dudas, 07-CV-1492 (D.D.C), on appeal, 2009-1120 (Fed. Cir.).

A. Wyeth and Elan Pharma International Limited filed a civil action in the United States District Court in and for the District of Columbia against Jon W. Dudas, as Under Secretary of Commerce for Intellectual Property and Director of the USPTO (07-CV-1492 (D.D.C.)). That case is on appeal to the United States Court of Appeals for the Federal Circuit.

B. Wyeth v. Dudas relates to the interpretation of 35 U.S.C. §154, and in particular, the interrelation of 35 U.S.C. §§154(b)(1)(A) and (b)(1)(B).

C. This Request is based on an interpretation of 35 U.S.C. §154, which is the subject of Wyeth v. Dudas. See Statement of Facts Accompanying Request, filed concurrently herewith, at paragraph 2(C).

D. A proper determination regarding this Request cannot be made, given that a final non-appealable decision on the merits in Wyeth v. Dudas will have collateral estoppel effect on the USPTO.

E. In view of the above, Patentees respectfully request that consideration of, and a decision regarding, this Request be deferred until a final non-appealable decision on the merits in Wyeth v. Dudas.

3. U.S. Patent No. 7,585,349 issued on September 8, 2009. Pursuant to 37 C.F.R. §1.705(d), this Request must be filed within two months of the date of issue of the patent. Thus, Patentees respectfully submit that this Request is timely filed.

4. Patentees submit herewith a "Statement Under 37 C.F.R. § 1.705(b)(2)".

5. In accordance with 37 C.F.R. § 1.705(b)(1), the \$200 fee set forth in 37 C.F.R. § 1.18(e) is being submitted herewith. Please charge any additional fees required or credit any overpayments to Deposit Account No. 50-2375.

6. In view of the foregoing, it is respectfully requested that this Application for Reconsideration of Patent Term Adjustment be favorably considered and that a corrected Determination of Patent Term Adjustment be issued to reflect a patent term adjustment of 1196 days of the patent.

7. Because this Application for Reconsideration of Patent Term Adjustment is being filed to correct an alleged USPTO error, Patentees respectfully request that the Application fee be refunded to Deposit Account No. 50-2375 if this Request is decided in Patentees' favor.

DATED this 9th day of November, 2009

Respectfully submitted,

By: /Daniel C. Higgs/
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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COMMISSIONER FOR PATENTS

STATEMENT OF FACTS ACCOMPANYING REQUEST FOR RECONSIDERATION OF
PATENT TERM ADJUSTMENT PURSUANT TO 37 CFR 1.705(d)

Dear Sir:

This Statement of Facts is respectfully submitted in support of the Application for Patent Term Adjustment Including Request for Reconsideration Under 37 C.F.R. §1.705(d) for the above-referenced patent. For the reasons set forth below, it is respectfully requested that Patentees be granted a patent term adjustment of 1196 days.

1. Erroneous Calculation of Delay

The U.S. Patent and Trademark Office failed to take into account all of the patent term adjustment (PTA) days that Patentees are entitled to pursuant to 35 USC § 154(b) when calculating the patent term adjustment. The PTA under 35 U.S.C. §154(b) indicated on the above-identified patent is 528 days, as shown in Exhibit A.

This determination of 528 days is in error, as it only reflects a portion of the days to which Patentees are entitled.

2. Examination Delays Pursuant to 37 C.F.R. 1.702 and 1.703

Pursuant to 35 U.S.C. §154(b), the term of patent shall be extended one day for each day that the Office failed to take certain actions within the time frames specified in 35 USC §154(b)(1)(A), which corresponds to 37 C.F.R. §1.702(a) (hereinafter "A Delay"), and failed to issue a patent within three years of the actual filing date of the above-referenced application in accordance with 35 USC § 154(b)(1)(B), which corresponds to 37 C.F.R. §1.702(b) (hereinafter "B Delay"). In the above-referenced patent, Patentees are entitled to a period of examination delay equal to the sum of the periods of delay under 37 C.F.R. § 1.703(a) and (b), less the periods of examination delay, for the following reasons.

A. "A Delay"

Pursuant to 35 U.S.C. § 154(b)(1)(A)(i) and 37 C.F.R. §1.702(a)(1), Patentees are entitled to a period of patent term adjustment due to the failure by the Office to mail an action under 35 USC § 132 not later than 14 months after the actual filing date of the application. Pursuant to 37 C.F.R. §1.703(a)(1), the PTA in such cases is the "number of days . . . in the period beginning on the day after the date that is fourteen months after the date on which the application was filed under 35 U.S.C. 111(a) . . . and ending on the date of mailing of either an action under 35 U.S.C. 132, or a notice of allowance under 35 U.S.C. 1515, whichever occurs first."

Accordingly, the Patentees are entitled to a PTA equal to the period beginning on February 10, 2005 (the day after the date that is fourteen months after the date on which the application was filed) and ending on June 22, 2007 (the date of mailing of an action under 35 U.S.C. § 132). Patentees respectfully submit that this period is 863 days.

B. "B Delay"

Pursuant to 35 U.S.C. § 154(b)(1)(B) and 37 C.F.R. § 1.702(b), a patent is required to issue within 3 years of the date on which the application was filed under 35 USC §111(a). However, pursuant to 35 U.S.C. § 154(b)(1)(B) and 37 C.F.R. §1.702(b)(1), this period shall not include time consumed by continued examination. Accordingly, under 37 C.F.R. §1.703(b)(1), the PTA in such cases is "the period beginning on the date that is three years after the date on which the application was filed under 35 U.S.C. 111(a) . . . and ending on the date a patent was issued, but not including the . . . number of days . . . in the period beginning on the date on which a request for continued examination of the application under 35 U.S.C. 132(b) was filed and ending on the date the patent was issued."

Accordingly, the Patentees are entitled to a PTA equal to the period beginning on December 10, 2005 (the date that is three years after the date on which the application was filed) and ending on September 8, 2009 (the date a patent was issued), but not including the period beginning on February 23, 2009 (the date on which a request for continued examination of the application under 35 U.S.C. 132(b) was filed) and ending on September 8, 2009 (the date the patent was issued). Patentees respectfully submit that this period is 807 days.

C. Total Examination Delay Pursuant to 37 C.F.R. § 1.703(f)

As set forth in 37 C.F.R. §1.703(f), the period of examination delay based on the grounds set forth in 37 C.F.R. §1.702 (hereafter the Total Examination Delay) is the sum of the period of A Delay and the B Delay, *to the extent these periods of delay are not overlapping*. Pursuant to Wyeth v. Dudas, "A Delay" days and "B Delay" days overlap only when they fall on the same calendar day. In the instant case, as can be seen from the foregoing discussion, the only overlapping days are from December 10, 2006 through June 22, 2007. Patentees respectfully submit that this period represents 195 days.

Accordingly, Patentees respectfully submit that the Total Examination Delay in the instant case is 863 days (A Delay) + 807 days (B Delay) – 197 days (Overlapping Days), which equals 1475 days.

D. Applicant Delay

In relevant part, 37 C.F.R. §1.704 states that an applicant shall be deemed to have failed to engage in reasonable efforts to conclude processing or examination of an application for the cumulative total of any periods of time in excess of three months that are taken to reply to any notice or action by the Office (hereinafter "Applicant Delay"). The Applicant Delay calculated by the USPTO for this case was 279 days, as shown in the attached Exhibit B.

E. Calculation of Correct PTA Pursuant to 37 CFR §1.703(f)

As set forth in 37 C.F.R. §1.703(f), Patentees are entitled to a period of patent term adjustment equal to the period of Total Examination Delay (i.e., A Delays + B Delays – Overlap) reduced by the period of Applicant Delay. Therefore, Patentees submit that the correct PTA for the above-referenced patent is:

$$1475 \text{ days (Total Examination Delay)} - 279 \text{ days (Applicant Delay)} = 1196 \text{ days.}$$

3. Pursuant to 37 C.F.R. § 1.705(b)(2)(iii), the Patentees hereby state that the above-identified patent is not subject to a terminal disclaimer.

4. Pursuant to 37 C.F.R. § 1.705(b)(2)(iv), the Patentees hereby state that, other than those referenced in section 2(D) above, there were no circumstances during the prosecution of the application resulting in the patent that may be considered to constitute a failure to engage in reasonable efforts to conclude processing or examination of the application as set forth in 37 C.F.R. § 1.704.

5. Pursuant to 37 C.F.R. § 1.705(b)(1), the Patentees note that the fee of \$200 set forth in 37 C.F.R. § 1.18(e) is being submitted herewith.

In view of the foregoing, it is respectfully requested that the Application for Patent Term Adjustment be favorably considered and that a corrected Determination of Patent Term Adjustment be issued to reflect a patent term adjustment of **1196** days of the patent.

DATED this 9th day of November, 2009

Respectfully submitted,

By: /Daniel C. Higgs/
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Attorney Docket No. 53433/2

EXHIBIT A



US007585349B2

(12) **United States Patent**
Xia et al.

(10) **Patent No.:** **US 7,585,349 B2**
(45) **Date of Patent:** **Sep. 8, 2009**

(54) **METHODS OF NANOSTRUCTURE
FORMATION AND SHAPE SELECTION**

2007/0289409 A1 12/2007 Xia et al.
2008/0093130 A1* 1/2008 Xia et al. 420/501

(75) **Inventors:** Younan Xia, Seattle, WA (US); Yugang Sun, Seattle, WA (US)

(73) **Assignee:** The University of Washington, Seattle, WA (US)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 528 days.

(21) **Appi. No.:** 10/732,910

(22) **Filed:** Dec. 9, 2003

(65) **Prior Publication Data**
US 2005/0056118 A1 Mar. 17, 2005

Related U.S. Application Data

(60) Provisional application No. 60/432,098, filed on Dec. 9, 2002.

(51) **Int. Cl.**
B22F 9/24 (2006.01)

(52) **U.S. Cl.** 75/371; 75/741; 977/896

(58) **Field of Classification Search** 75/371;
977/762, 810

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,759,230 A 6/1998 Chow et al.
6,413,487 B1 7/2002 Resasco et al.
6,875,253 B2* 4/2005 Daimon et al. 75/255
2003/0136223 A1* 7/2003 Jia et al. 75/345

OTHER PUBLICATIONS

Carotenuto, G. et al., "Preparation and characterization of nano-sized Ag/PVP composites for optical applications", *European Physical Journal B*, vol. 16, pp. 11-17, Jul. 26, 2000.*

Sun, Y. et al., "Crystalline Silver Nanowires by Soft Solution Processing", *Nano Letters*, vol. 2 No. 2, pp. 165-168, Jan. 3, 2002.*

Sun, Y. et al., "Uniform Silver Nanowires Synthesis by Reducing AgNO₃ with Ethylene Glycol in the Presence of Seeds and Poly(Vinyl Pyrrolidone)", *Chem. Mater.*, 2002, No. 14, pp. 4736-4745, Oct. 8, 2002.*

Yugang Sun and Younan Xia, "Shape-Controlled Synthesis of Gold and Silver Nanoparticles," *Science*, vol. 298, Dec. 13, 2002, pp. 2176-2179.

Yugang Sun and Younan Xia, "Alloying and Dealloying Processes Involved in the Preparation of Metal Nanoshells Through a Galvanic Replacement Reaction," *Nano Letters*, vol. 0, No. 0, Sep. 11, 2003, Department of Chemistry, University of Washington, pp. A-D.

(Continued)

Primary Examiner—George Wyszomierski

(74) *Attorney, Agent, or Firm*—Stoel Rives LLP

(57) **ABSTRACT**

Methods for forming nanostructures of various shapes are disclosed. Nanocubes, nanowires, nanopyramids and multiply twinned particles of silver may be formed by combining a solution of silver nitrate in ethylene glycol with a solution of poly(vinyl pyrrolidone) in ethylene glycol. Hollow nanostructures may be formed by reacting a solution of solid nanostructures comprising one of a first metal and a first metal alloy with a metal salt that can be reduced by the first metal or first metal alloy. Nanostructures comprising a core with at least one nanoshell may be formed by plating a nanostructure and reacting the plating with a metal salt.

14 Claims, 28 Drawing Sheets

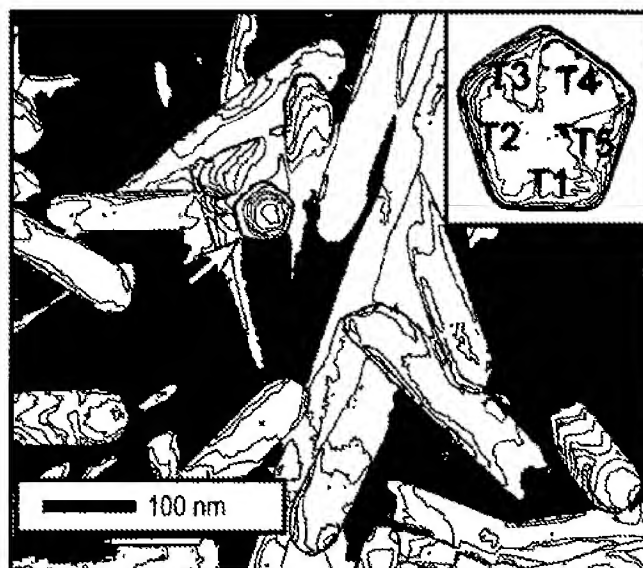


EXHIBIT B

Patent Term Adjustments

Patent Term Adjustment (PTA) for Application Number: 10/732,910

Filing or 371(c) Date:	12-09-2003	USPTO Delay (PTO) Delay (days):	807
Issue Date of Patent:	09-08-2009	Three Years:	-
Pre-Issue Petitions (days):	+0	Applicant Delay (APPL) Delay (days):	279
Post-Issue Petitions (days):	+0	Total PTA (days):	528
USPTO Adjustment(days):	+0	Explanation Of Calculations	

Patent Term Adjustment History

Date	Contents Description	PTO(Days)	APPL(Days)
08-19-2009	PTA 36 Months	35	
09-08-2009	Patent Issue Date Used in PTA Calculation		
08-03-2009	Dispatch to FDC	⌘	
07-29-2009	Application Is Considered Ready for Issue	⌘	
07-27-2009	Issue Fee Payment Verified	⌘	
07-27-2009	Issue Fee Payment Received	⌘	
07-07-2009	TC Return to Pubs	⌘	
06-11-2009	Mail Miscellaneous Communication to Applicant	⌘	
05-21-2009	Pubs Case Remand to TC	⌘	
06-09-2009	Miscellaneous Communication to Applicant - No Action Count	⌘	
06-05-2009	TC Return to Pubs	⌘	
04-27-2009	Mail Notice of Allowance	⌘	
04-27-2009	Document Verification	⌘	
04-27-2009	Notice of Allowance Data Verification Completed	⌘	
04-27-2009	Case Docketed to Examiner in GAU	⌘	
04-17-2009	Information Disclosure Statement (IDS) Filed	⌘	
02-23-2009	Affidavit(s) (Rule 131 or 132) or Exhibit(s) Received	⌘	
02-23-2009	Affidavit(s) (Rule 131 or 132) or Exhibit(s) Received	⌘	
02-25-2009	Date Forwarded to Examiner	⌘	
02-25-2009	Date Forwarded to Examiner	⌘	
02-23-2009	Request for Continued Examination (RCE)		33
02-25-2009	DISPOSAL FOR A RCE/CPA/129 (express abandonment if CPA)		⌘
02-23-2009	Workflow - Request for RCE - Begin		⌘
10-21-2008	Mail Final Rejection (PTOL - 326)		⌘
10-01-2008	Final Rejection		
06-17-2008	Information Disclosure Statement considered		
08-11-2008	Mail Examiner Interview Summary (PTOL - 413)		
08-05-2008	Examiner Interview Summary Record (PTOL - 413)		
08-06-2008	Date Forwarded to Examiner		
08-05-2008	Response after Non-Final Action		92

08-05-2008	Request for Extension of Time - Granted	✦
06-17-2008	Information Disclosure Statement (IDS) Filed	✦
06-17-2008	Information Disclosure Statement (IDS) Filed	✦
02-05-2008	Mail Non-Final Rejection	✦
02-01-2008	Non-Final Rejection	
12-02-2007	Date Forwarded to Examiner	
11-21-2007	Response after Non-Final Action	60
11-21-2007	Request for Extension of Time - Granted	✦
10-04-2007	Case Docketed to Examiner in GAU	✦
06-22-2007	Mail Non-Final Rejection	✦
06-20-2007	Non-Final Rejection	
06-21-2004	Information Disclosure Statement considered	
06-04-2007	Case Docketed to Examiner in GAU	
05-31-2007	Date Forwarded to Examiner	
05-29-2007	Response to Election / Restriction Filed	
05-29-2007	Request for Extension of Time - Granted	
03-23-2007	Mail Restriction Requirement	772
03-22-2007	Requirement for Restriction / Election	✦
02-23-2007	Case Docketed to Examiner in GAU	✦
09-20-2004	New or Additional Drawing Filed	✦
02-02-2007	Transfer Inquiry to GAU	✦
10-26-2006	Transfer Inquiry to GAU	✦
11-25-2005	IFW TSS Processing by Tech Center Complete	✦
06-21-2004	Information Disclosure Statement (IDS) Filed	✦
06-21-2004	Information Disclosure Statement (IDS) Filed	✦
05-18-2005	Preliminary Amendment	✦
10-07-2004	Application Return from OIPE	✦
10-07-2004	Application Is Now Complete	✦
10-07-2004	Application Return TO OIPE	✦
10-07-2004	Application Return from OIPE	✦
10-07-2004	Application Return TO OIPE	✦
10-07-2004	Application Dispatched from OIPE	✦
10-07-2004	Application Is Now Complete	✦
09-20-2004	Additional Application Filing Fees	94
12-09-2003	Drawing Preliminary Amendment	✦
09-20-2004	Applicant has submitted new drawings to correct Corrected Papers problems	✦
06-21-2004	Payment of additional filing fee/Preexam	✦
06-21-2004	A statement by one or more inventors satisfying the requirement under 35 USC 115, Oath of the Applic	✦
06-21-2004	Applicant has submitted new drawings to correct Corrected Papers problems	✦

03-18-2004	Notice Mailed--Application Incomplete--Filing Date Assigned
03-01-2004	Cleared by L&R (LARS)
02-13-2004	Referred to Level 2 (LARS) by OIPE CSR
01-06-2004	IFW Scan & PACR Auto Security Review
12-09-2003	Initial Exam Team on



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